



**CONFIDENTIAL**

**WELL COMPLETION FORM**

**WELL HISTORY - DESCRIPTION OF WELL & LEASE**

OPERATOR: License # 34574  
Name: Shell Gulf of Mexico Inc.  
Address 1: 150 N DAIRY-ASHFORD (77079)  
Address 2: PO BOX 576 (77001-0576)  
City: HOUSTON State: TX Zip: 77001 + 0576  
Contact Person: Damonica Pierson  
Phone: ( 832 ) 337-2172  
CONTRACTOR: License # 34718  
Name: Nabors Drilling USA, LP  
Wellsite Geologist: Jack Grow  
Purchaser: \_\_\_\_\_

Designate Type of Completion:

- New Well     Re-Entry     Workover
- Oil     WSW     SWD     SIOW  
 Gas     D&A     ENHR     SIGW  
 OG     GSW     Temp. Abd.  
 CM (Coal Bed Methane)  
 Cathodic     Other (Core, Expl., etc.): \_\_\_\_\_

If Workover/Re-entry: Old Well Info as follows:

Operator: \_\_\_\_\_

Well Name: \_\_\_\_\_

Original Comp. Date: \_\_\_\_\_ Original Total Depth: \_\_\_\_\_

- Deepening     Re-perf.     Conv. to ENHR     Conv. to SWD  
 Conv. to GSW
- Plug Back: \_\_\_\_\_ Plug Back Total Depth \_\_\_\_\_  
 Commingled    Permit #: \_\_\_\_\_  
 Dual Completion    Permit #: \_\_\_\_\_  
 SWD    Permit #: \_\_\_\_\_  
 ENHR    Permit #: \_\_\_\_\_  
 GSW    Permit #: \_\_\_\_\_

05/21/2012    08/25/2012    10/30/2012  
Spud Date or    Date Reached TD    Completion Date or  
Recompletion Date       Recompletion Date

API No. 15 - 15-077-21814-01-00

Spot Description: \_\_\_\_\_

E2 SE SW SW Sec. 30 Twp. 34 S. R. 7  East  West

330 Feet from  North /  South Line of Section

1295 Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE     NW     SE     SW

County: Harper

Lease Name: Croft Farms 3407 Well #: 30-1H

Field Name: \_\_\_\_\_

Producing Formation: Mississippi

Elevation: Ground: 1331 Kelly Bushing: 1351

Total Depth: 8996 Plug Back Total Depth: 8933

Amount of Surface Pipe Set and Cemented at: 794 Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set: \_\_\_\_\_ Feet

If Alternate II completion, cement circulated from: \_\_\_\_\_

feet depth to: \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.

**Drilling Fluid Management Plan**

(Data must be collected from the Reserve Pit)

Chloride content: 0 ppm Fluid volume: 0 bbls

Dewatering method used: Hauled to Disposal

Location of fluid disposal if hauled offsite:

Operator Name: Plumb Thaicket Landfill

Lease Name: N/A License #: 99999

Quarter SW Sec. 4 Twp. 31 S. R. 6  East  West

County: Harper Permit #: KDHE Permit No. 0842

**AFFIDAVIT**

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

**KCC Office Use ONLY**

- Letter of Confidentiality Received  
Date: 04/05/2012
- Confidential Release Date: \_\_\_\_\_
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: NAOMI JAMES Date: 11/09/2012

# T34S, R7W, 6th P.M.

# SGOMI

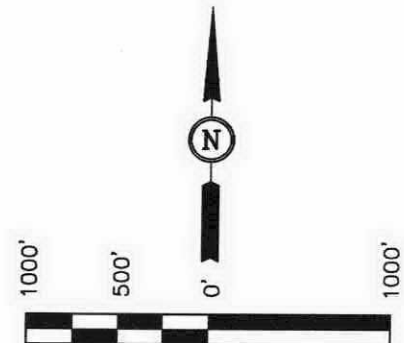
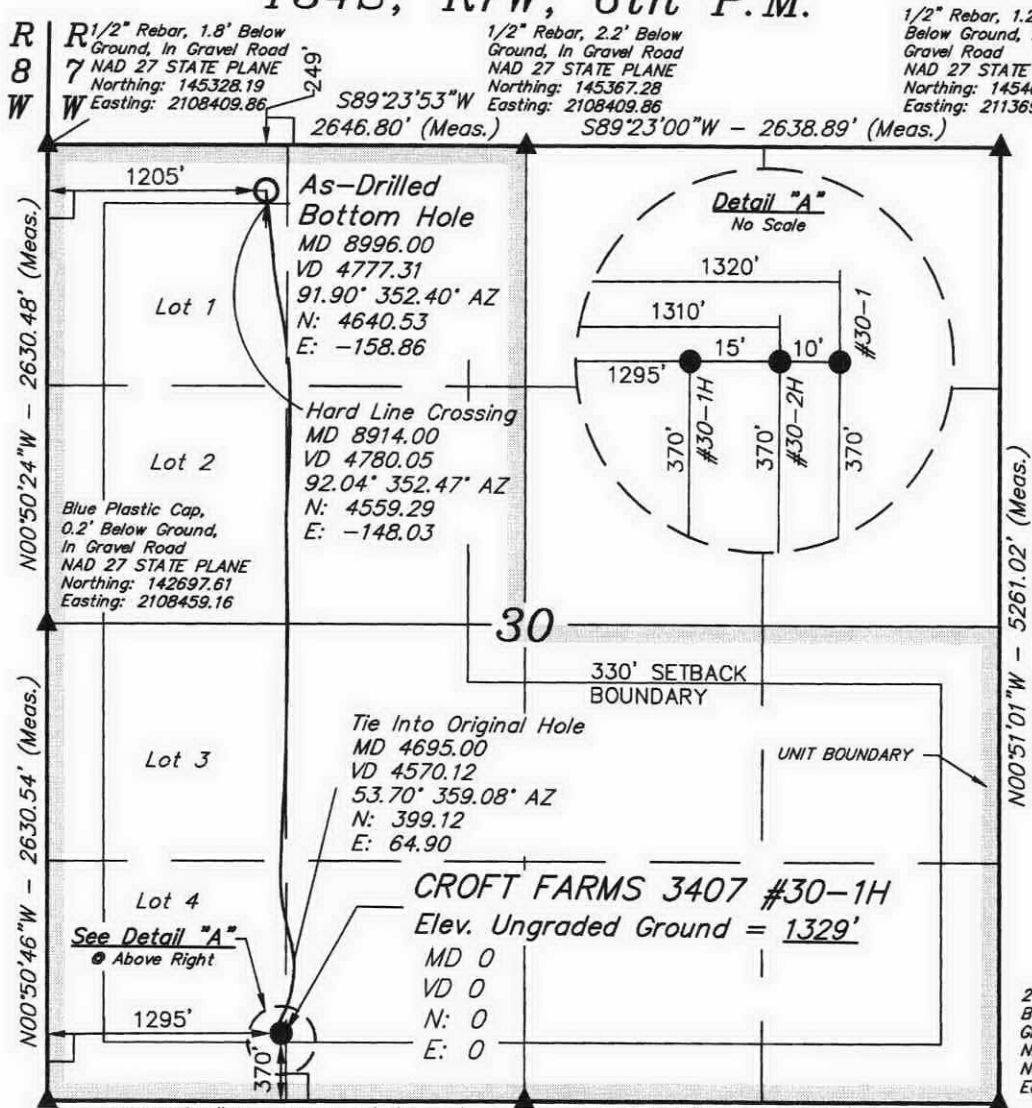
Well location, CROFT FARMS 3407 #30-1H, located as shown in Lot 4 of Section 30, T34S, R7W, 6th P.M., Harper County, Kansas.

## BASIS OF ELEVATION

SPOT ELEVATION LOCATED AT THE NORTHEAST CORNER OF SECTION 22, T33S, R7W, 6th P.M. TAKEN FROM THE ANTHONY, QUADRANGLE, KANSAS, HARPER COUNTY, 7.5 MINUTE QUAD (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 1348 FEET.

## BASIS OF BEARINGS

BASIS OF BEARINGS IS A G.P.S. OBSERVATION.



## CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

*Robert Justin Peavner*  
 REGISTERED LAND SURVEYOR  
 REGISTRATION NO. 1451  
 STATE OF KANSAS  
 10-29-12

2" Alum. Cap, 0.5'  
 Below Ground, In  
 Gravel Road  
 NAD 27 STATE PLANE  
 Northing: 140145.08  
 Easting: 2113793.89

## LEGEND:

- ☐ = 90° SYMBOL
- = PROPOSED WELL HEAD.
- ▲ = SECTION CORNERS LOCATED.

<b>NAD 83 (#30-1H AS DRILLED BOTTOM HOLE)</b> LATITUDE = 37°03'52.46" (37.064572) LONGITUDE = 98°07'28.87" (98.124686)	<b>NAD 83 (#30-1H SURFACE LOCATION)</b> LATITUDE = 37°03'06.57" (37.051825) LONGITUDE = 98°07'26.90" (98.124139)
<b>NAD 27 (#30-1H AS DRILLED BOTTOM HOLE)</b> LATITUDE = 37°03'52.37" (37.064547) LONGITUDE = 98°07'27.63" (98.124342)	<b>NAD 27 (#30-1H SURFACE LOCATION)</b> LATITUDE = 37°03'06.48" (37.051800) LONGITUDE = 98°07'25.67" (98.123797)
<b>STATE PLANE NAD 27</b> N: 145097.24 E: 2109618.79	<b>STATE PLANE NAD 27</b> N: 140456.71 E: 2109796.88

<b>UINTAH ENGINEERING &amp; LAND SURVEYING</b>			
85 SOUTH 200 EAST - VERNAL, UTAH 84078			
(435) 789-1017			
SCALE 1" = 1000'	DATE SURVEYED: 08-25-12	DATE DRAWN: 10-26-12	
PARTY L.S. D.S. C.A.G.	REFERENCES G.L.O. PLAT		
WEATHER WARM	FILE SGOMI		

# Shell Exploration & Production Co. Inc.

Harper Co. KS (NAD-27)

Sec 30-T34S-R07W

Croft Farms 3407 #30-1H/ Job#9281846 / Nabors 774

Wellbore #1

Design: Wellbore #1

## Sperry Drilling Services Combo Report With Grid North & True North

27 July, 2012

Well Coordinates: 140,456.71 N, 2,109,796.88 E (37° 03' 06.48" N, 098° 07' 25.67" W)

Ground Level: 1,329.00 ft

Local Coordinate Origin:

Centered on Well Croft Farms 3407 #30-1H/ Job#9281846 / Nabors 774

Viewing Datum:

WELL @ 1350.68ft (Original Well Elev)

TVDs to System:

N

North Reference:

True

Unit System:

API-US-new

Version: 2003.21 Build: 43

HALLIBURTON

Design Report for Croft Farms 3407 #30-1H/ Job#9281846 / Nabors 774 - Wellbore #1

Measured Depth (ft)	Inclination (°)	Grid Azimuth (°)	True Azimuth (°)	TVD below System (ft)	Vertical Depth (ft)	Local Coordinates (ft)		Map Coordinates (ft)		Dogleg Rate (°/100ft)	Vertical Section (ft)	Comments
						Northing	Easting	Northing	Easting			
0.00	0.00	359.77	0.00	1,350.68	0.00	0.00 N	0.00 E	140,456.71	2,109,796.88	0.00	0.00	
144.00	0.46	250.36	250.59	1,206.68	144.00	0.19 S	0.55 W	140,456.52	2,109,796.34	0.32	-0.18	First MWD Survey
205.00	0.87	296.68	296.91	1,145.69	204.99	0.06 S	1.19 W	140,456.64	2,109,795.69	1.06	-0.05	
267.00	2.29	329.27	329.50	1,083.71	266.97	1.22 N	2.24 W	140,457.92	2,109,794.64	2.62	1.25	
328.00	4.17	350.57	350.80	1,022.81	327.87	4.46 N	3.21 W	140,461.15	2,109,793.65	3.61	4.50	
389.00	6.08	355.29	355.52	962.05	388.63	9.87 N	3.82 W	140,466.56	2,109,793.02	3.20	9.92	
451.00	6.77	355.91	356.14	900.44	450.24	16.79 N	4.32 W	140,473.48	2,109,792.49	1.12	16.85	
512.00	6.54	356.39	356.62	839.85	510.83	23.84 N	4.77 W	140,480.53	2,109,792.02	0.39	23.91	
604.00	4.97	353.14	353.37	748.32	602.36	33.03 N	5.54 W	140,489.72	2,109,791.21	1.74	33.11	
696.00	3.85	353.94	354.17	656.59	694.09	40.06 N	6.31 W	140,496.75	2,109,790.41	1.22	40.15	
731.00	3.55	355.17	355.40	621.67	729.01	42.31 N	6.52 W	140,498.99	2,109,790.19	0.89	42.40	
898.00	2.89	357.25	357.48	454.93	895.75	51.67 N	7.12 W	140,508.35	2,109,789.56	0.40	51.77	
990.00	2.38	356.53	356.76	363.03	987.65	55.90 N	7.33 W	140,512.57	2,109,789.33	0.56	56.00	
1,082.00	2.34	351.81	352.04	271.11	1,079.57	59.66 N	7.69 W	140,516.34	2,109,788.95	0.22	59.77	
1,174.00	1.58	334.52	334.75	179.16	1,171.52	62.67 N	8.50 W	140,519.34	2,109,788.13	1.04	62.79	
1,267.00	0.68	263.65	263.88	86.18	1,264.50	63.77 N	9.59 W	140,520.44	2,109,787.03	1.61	63.91	
1,359.00	0.75	221.20	221.43	-5.82	1,356.50	63.26 N	10.53 W	140,519.93	2,109,786.09	0.57	63.41	
1,451.00	0.87	197.13	197.36	-97.81	1,448.49	62.14 N	11.14 W	140,518.81	2,109,785.49	0.39	62.30	
1,543.00	0.87	203.94	204.17	-189.80	1,540.48	60.84 N	11.63 W	140,517.50	2,109,785.00	0.11	61.00	
1,638.00	0.62	214.20	214.43	-284.79	1,635.47	59.76 N	12.22 W	140,516.42	2,109,784.42	0.30	59.93	
1,732.00	0.69	194.94	195.17	-378.78	1,729.46	58.79 N	12.65 W	140,515.45	2,109,783.99	0.24	58.97	
1,827.00	0.53	215.27	215.50	-473.78	1,824.46	57.88 N	13.06 W	140,514.54	2,109,783.59	0.28	58.07	
1,921.00	0.46	199.63	199.86	-567.77	1,918.45	57.17 N	13.44 W	140,513.83	2,109,783.21	0.16	57.37	
2,016.00	0.59	200.08	200.31	-662.77	2,013.45	56.36 N	13.74 W	140,513.01	2,109,782.91	0.14	56.55	
2,110.00	0.44	207.09	207.32	-756.77	2,107.45	55.58 N	14.07 W	140,512.23	2,109,782.58	0.17	55.78	
2,205.00	0.20	198.26	198.49	-851.76	2,202.44	55.10 N	14.29 W	140,511.75	2,109,782.36	0.26	55.31	
2,299.00	0.33	170.30	170.53	-945.76	2,296.44	54.68 N	14.30 W	140,511.33	2,109,782.36	0.19	54.88	
2,394.00	0.25	195.02	195.25	-1,040.76	2,391.44	54.21 N	14.31 W	140,510.86	2,109,782.35	0.15	54.41	
2,489.00	0.28	187.76	187.99	-1,135.76	2,486.44	53.78 N	14.40 W	140,510.43	2,109,782.27	0.05	53.98	
2,583.00	0.34	222.22	222.45	-1,229.76	2,580.44	53.34 N	14.62 W	140,509.99	2,109,782.05	0.20	53.55	
2,678.00	0.22	258.79	259.02	-1,324.76	2,675.44	53.10 N	14.99 W	140,509.75	2,109,781.68	0.22	53.32	
2,772.00	0.10	328.60	328.83	-1,418.76	2,769.44	53.14 N	15.21 W	140,509.78	2,109,781.46	0.22	53.36	
2,867.00	0.15	285.97	286.20	-1,513.76	2,864.44	53.24 N	15.37 W	140,509.89	2,109,781.30	0.11	53.46	
2,961.00	0.29	223.95	224.18	-1,607.76	2,958.44	53.11 N	15.65 W	140,509.75	2,109,781.01	0.27	53.33	
3,056.00	0.28	195.94	196.17	-1,702.76	3,053.44	52.71 N	15.88 W	140,509.36	2,109,780.78	0.15	52.94	
3,150.00	0.32	165.14	165.37	-1,796.76	3,147.44	52.24 N	15.88 W	140,508.88	2,109,780.79	0.17	52.47	
3,245.00	0.59	155.35	155.58	-1,891.75	3,242.43	51.53 N	15.61 W	140,508.18	2,109,781.06	0.29	51.76	

Design Report for Croft Farms 3407 #30-1H/ Job#9281846 / Nabors 774 - Wellbore #1

Measured Depth (ft)	Inclination (°)	Grid Azimuth (°)	True Azimuth (°)	TVD below System (ft)	Vertical Depth (ft)	Local Coordinates (ft)		Map Coordinates (ft)		Dogleg Rate (°/100ft)	Vertical Section (ft)	Comments
						Northing	Easting	Northing	Easting			
3,339.00	0.35	139.17	139.40	-1,985.75	3,336.43	50.88 N	15.23 W	140,507.52	2,109,781.45	0.29	51.10	
3,434.00	0.20	154.95	155.18	-2,080.75	3,431.43	50.50 N	14.97 W	140,507.15	2,109,781.71	0.18	50.72	
3,528.00	0.22	158.48	158.71	-2,174.75	3,525.43	50.19 N	14.83 W	140,506.84	2,109,781.84	0.03	50.40	
3,623.00	0.29	97.67	97.90	-2,269.75	3,620.43	49.98 N	14.53 W	140,506.64	2,109,782.15	0.28	50.19	
3,718.00	1.13	68.57	68.80	-2,364.74	3,715.42	50.29 N	13.42 W	140,506.95	2,109,783.26	0.93	50.48	
3,812.00	1.16	56.95	57.18	-2,458.72	3,809.40	51.14 N	11.75 W	140,507.80	2,109,784.92	0.25	51.31	
3,907.00	0.76	64.34	64.57	-2,553.71	3,904.39	51.93 N	10.38 W	140,508.60	2,109,786.29	0.44	52.08	
3,970.00	0.97	27.37	27.60	-2,616.70	3,967.38	52.59 N	9.75 W	140,509.26	2,109,786.92	0.93	52.72	
4,001.00	3.45	16.12	16.35	-2,647.67	3,998.35	53.71 N	9.37 W	140,510.38	2,109,787.30	8.08	53.85	
4,033.00	7.82	16.30	16.53	-2,679.51	4,030.19	56.73 N	8.48 W	140,513.40	2,109,788.17	13.66	56.84	
4,064.00	11.90	16.97	17.20	-2,710.05	4,060.73	61.80 N	6.93 W	140,518.48	2,109,789.70	13.17	61.90	
4,096.00	15.51	21.03	21.26	-2,741.13	4,091.81	68.94 N	4.40 W	140,525.64	2,109,792.20	11.67	69.00	
4,127.00	17.60	23.83	24.06	-2,770.85	4,121.53	77.09 N	0.99 W	140,533.79	2,109,795.58	7.21	77.09	
4,159.00	18.55	24.74	24.97	-2,801.27	4,151.95	86.12 N	3.13 E	140,542.84	2,109,799.66	3.10	86.06	
4,190.00	19.96	23.99	24.22	-2,830.53	4,181.21	95.42 N	7.38 E	140,552.15	2,109,803.88	4.62	95.30	
4,222.00	22.44	23.04	23.27	-2,860.36	4,211.04	106.01 N	12.04 E	140,562.77	2,109,808.49	7.82	105.82	
4,253.00	26.12	22.30	22.53	-2,888.62	4,239.30	117.75 N	16.99 E	140,574.53	2,109,813.40	11.91	117.49	
4,285.00	29.58	21.80	22.03	-2,916.91	4,267.59	131.58 N	22.66 E	140,588.38	2,109,819.00	10.84	131.23	
4,317.00	32.95	20.81	21.04	-2,944.26	4,294.94	147.03 N	28.74 E	140,603.86	2,109,825.03	10.65	146.59	
4,348.00	35.06	18.96	19.19	-2,969.95	4,320.63	163.31 N	34.70 E	140,620.16	2,109,830.92	7.58	162.78	
4,380.00	36.35	16.32	16.55	-2,995.94	4,346.62	181.08 N	40.42 E	140,637.96	2,109,836.57	6.28	180.46	
4,411.00	37.63	13.51	13.74	-3,020.70	4,371.38	199.09 N	45.29 E	140,655.98	2,109,841.36	6.84	198.39	
4,443.00	39.50	11.84	12.07	-3,045.72	4,396.40	218.53 N	49.74 E	140,675.44	2,109,845.73	6.69	217.77	
4,474.00	40.67	9.87	10.10	-3,069.44	4,420.12	238.12 N	53.57 E	140,695.04	2,109,849.49	5.57	237.30	
4,506.00	42.27	8.49	8.72	-3,093.42	4,444.10	259.02 N	57.03 E	140,715.96	2,109,852.86	5.76	258.15	
4,537.00	43.80	7.24	7.47	-3,116.08	4,466.76	279.97 N	60.01 E	140,736.92	2,109,855.76	5.65	279.05	
4,569.00	45.24	5.60	5.83	-3,138.89	4,489.57	302.25 N	62.60 E	140,759.21	2,109,858.26	5.76	301.29	
4,600.00	48.05	3.88	4.11	-3,160.17	4,510.85	324.70 N	64.54 E	140,781.67	2,109,860.11	9.92	323.71	
4,632.00	50.94	2.10	2.33	-3,180.96	4,531.64	348.99 N	65.90 E	140,805.96	2,109,861.37	9.97	347.98	
4,663.00	52.36	0.37	0.60	-3,200.19	4,550.87	373.29 N	66.52 E	140,830.27	2,109,861.89	6.34	372.27	
4,695.00	53.70	359.08	359.31	-3,219.44	4,570.12	398.86 N	66.50 E	140,855.83	2,109,861.77	5.28	397.83	
4,758.00	58.29	356.97	357.20	-3,254.66	4,605.34	451.04 N	64.88 E	140,908.01	2,109,859.94	7.80	450.03	
4,852.00	58.92	357.31	357.54	-3,303.63	4,654.31	531.19 N	61.20 E	140,988.15	2,109,855.94	0.74	530.23	
4,915.00	60.21	359.06	359.29	-3,335.55	4,686.23	585.49 N	59.70 E	141,042.43	2,109,854.22	3.15	584.54	
4,947.00	62.46	1.53	1.76	-3,350.90	4,701.58	613.56 N	59.97 E	141,070.51	2,109,854.37	9.76	612.60	
4,979.00	64.89	3.31	3.54	-3,365.09	4,715.77	642.21 N	61.30 E	141,099.16	2,109,855.59	9.08	641.23	
5,010.00	66.92	4.13	4.36	-3,377.74	4,728.42	670.44 N	63.25 E	141,127.39	2,109,857.42	6.98	669.42	

Design Report for Croft Farms 3407 #30-1H/ Job#9281846 / Nabors 774 - Wellbore #1

Measured Depth (ft)	Inclination (°)	Grid Azimuth (°)	True Azimuth (°)	TVD below System (ft)	Vertical Depth (ft)	Local Coordinates (ft)		Map Coordinates (ft)		Dogleg Rate (°/100ft)	Vertical Section (ft)	Comments
						Northing	Easting	Northing	Easting			
5,042.00	70.91	4.71	4.94	-3,389.25	4,739.93	700.19 N	65.67 E	141,157.16	2,109,859.73	12.58	699.14	
5,073.00	73.87	5.82	6.05	-3,398.63	4,749.31	729.60 N	68.50 E	141,186.58	2,109,862.44	10.14	728.50	
5,105.00	77.16	5.59	5.82	-3,406.63	4,757.31	760.41 N	71.71 E	141,217.40	2,109,865.52	10.30	759.26	
5,136.00	80.16	4.75	4.98	-3,412.73	4,763.41	790.67 N	74.56 E	141,247.67	2,109,868.25	10.04	789.47	
5,168.00	83.47	3.67	3.90	-3,417.28	4,767.96	822.24 N	77.01 E	141,279.25	2,109,870.58	10.87	821.01	Last MWD Survey

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates (ft)		Comment
		+N/-S	+E/-W	
144.00	144.00	-0.19	-0.55	First MWD Survey
5,168.00	4,767.96	822.24	77.01	Last MWD Survey

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin (ft)		Start TVD (ft)
				+N/_S	+E/-W	
User	No Target (Freehand)	359.15	Slot	0.00	0.00	0.00

Survey tool program

From (ft)	To (ft)	Survey/Plan	Survey Tool
144.00	5,168.00	MWD Survey	MWD+SC

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (°)	+N/-S (°)	+E/-W (°)	Northing (°)	Easting (°)	Latitude	Longitude



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**Design Report for Croft Farms 3407 #30-1H/ Job#9281846 / Nabors 774 - Wellbore #1**

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**Directional Difficulty Index**

Average Dogleg over Survey:	2.18 °/100ft	Maximum Dogleg over Survey:	13.66 °/100ft at 4,033.00 ft
Net Tortosity applicable to Plans:	0.14 °/100ft	Directional Difficulty Index:	5.028

**Audit Info**

**North Reference Sheet for Sec 30-T34S-R07W - Croft Farms 3407 #30-1H/ Job#9281846 / Nabors 774 - Wellbore #1**

All data is in Feet unless otherwise stated. Directions and Coordinates are relative to True North Reference.

Vertical Depths are relative to WELL @ 1350.68ft (Original Well Elev). Northing and Easting are relative to Croft Farms 3407 #30-1H/ Job#9281846 / Nabors 774

Coordinate System is US State Plane 1927 (Exact solution), Kansas South 1502 using datum NAD 1927 (NADCON CONUS), ellipsoid Clarke 1866

Projection method is Lambert Conformal Conic (2 parallel)

Central Meridian is 98° 30' 0.000 W°, Longitude Origin:0° 0' 0.000 E°, Latitude Origin:37° 16' 0.000 N°

False Easting: 2,000,000.00ft, False Northing: 0.00ft, Scale Reduction: 1.00004918

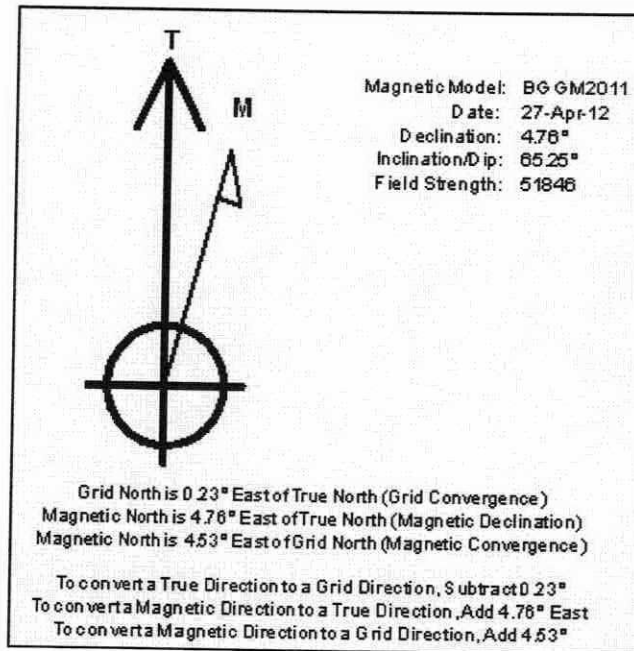
Grid Coordinates of Well: 140,456.71 ft N, 2,109,796.88 ft E

Geographical Coordinates of Well: 37° 03' 06.48" N, 098° 07' 25.67" W

Grid Convergence at Surface is: 0.23°

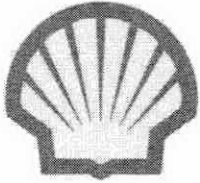
Based upon Minimum Curvature type calculations, at a Measured Depth of 5,168.00ft the Bottom Hole Displacement is 825.84ft in the Direction of 5.35° (True).

Magnetic Convergence at surface is: -4.53° (27 April 2012, , BGGM2011)





# Shell Exploration and Production Company

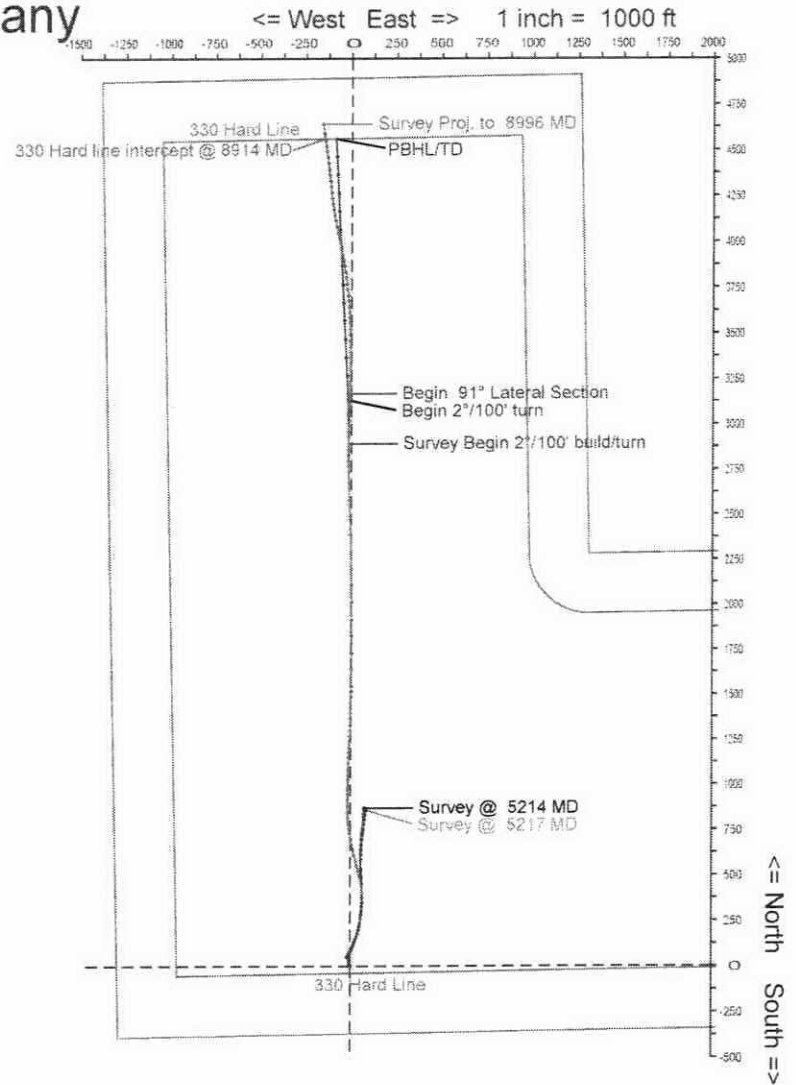
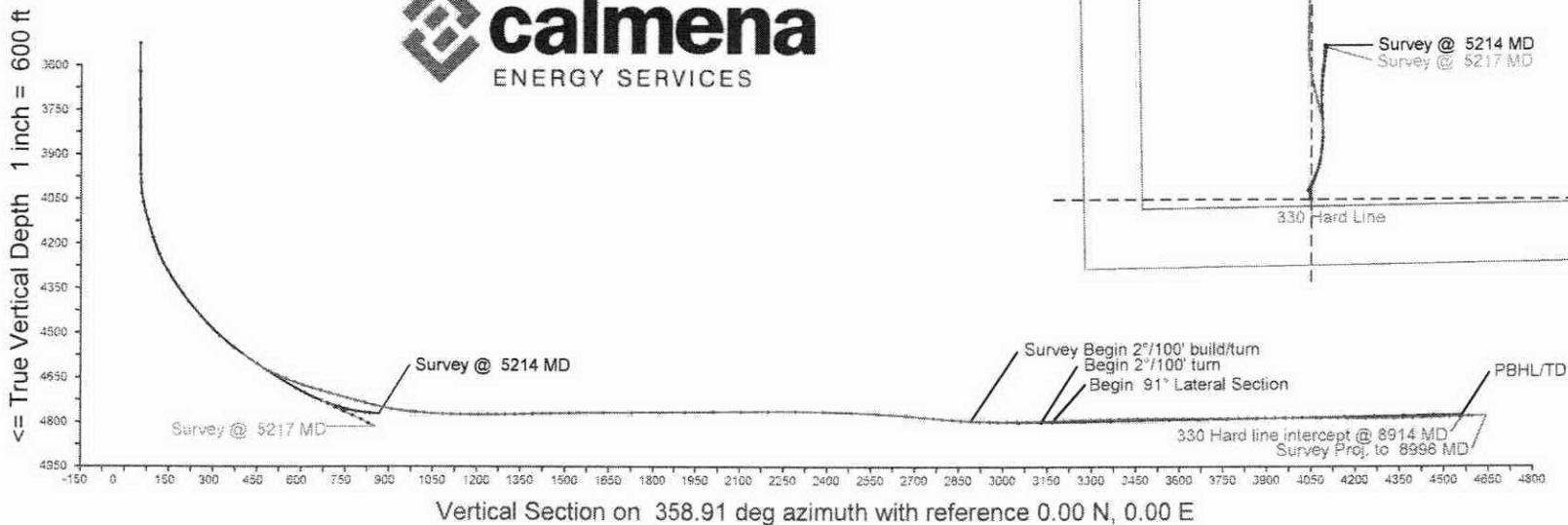


Croft Farms 3407 #30-1H

Harper County, Kansas

WELL PROFILE DATA rev5							
MD	Inc.	Azi.	TVD	N/-S	E/-W	DLS	Comment
7234	87.10	0.80	4796	2891	-16	0.00	Survey Begin 2°/100' build/turn
7474	91.00	357.98	4800	3131	-18	2.01	Begin 2°/100' turn
7510	91.00	357.26	4798	3166	-20	2.00	Begin 91° Lateral Section
8906	91.00	357.26	4775	4560	-86	0.00	PBHL/TD

WELL PROFILE DATA svys							
MD	Inc.	Azi.	TVD	N/-S	E/-W	DLS	Comment
8914	92.04	352.47	4780	4559	-148	0.70	330 Hard line intercept @ 8914 MD
8996	91.90	352.46	4777	4641	-159	0.00	Survey Proj. to 8996 MD



**Calmena Energy Services**

Company: Shell Exploration and Production Company  
 Well: Croft Farms 3407 #30-1H  
 Location: Harper County, Kansas

Date: 25-Aug-2012  
 Surveys ST2  
 Page 1

Job# : 6701

MD (feet)	Inclination (degrees)	Azimuth (degrees)	TVD RKB (feet)	N-S (feet)	E-W (feet)	DLS (deg/100')	VS @ 358.91° Az (feet)	Grid Y	Grid X	Comments
								<b>140456.71</b>	<b>2109796.88</b>	
Surface Location										
4695.00	53.70	359.08	4570.12	399.12	64.90	0.00	397.81	140855.83	2109861.78	Tie into original hole.
4808.00	63.30	342.90	4629.38	493.57	49.21	14.84	492.54	140950.28	2109846.09	
4840.00	66.80	346.70	4642.88	521.56	41.62	15.35	520.67	140978.27	2109838.50	
4871.00	69.20	346.10	4654.49	549.49	34.86	7.95	548.73	141006.20	2109831.74	
4903.00	70.90	344.80	4665.41	578.61	27.31	6.54	577.98	141035.32	2109824.19	
4935.00	72.10	345.60	4675.56	607.95	19.56	4.44	607.46	141064.66	2109816.44	
4966.00	73.40	346.70	4684.76	636.69	12.47	5.39	636.34	141093.40	2109809.35	
4998.00	74.20	348.50	4693.69	666.70	5.87	5.95	666.47	141123.41	2109802.75	
5029.00	74.50	350.10	4702.05	696.03	0.33	5.06	695.90	141152.74	2109797.21	
5061.00	74.70	351.40	4710.55	726.48	-4.63	3.97	726.44	141183.19	2109792.25	
5093.00	75.00	353.00	4718.91	757.08	-8.82	4.92	757.11	141213.79	2109788.06	
5124.00	75.10	354.60	4726.91	786.86	-12.05	5.00	786.94	141243.57	2109784.83	
5156.00	75.20	356.50	4735.11	817.69	-14.45	5.75	817.82	141274.40	2109782.43	
5187.00	76.20	358.50	4742.77	847.70	-15.76	7.03	847.85	141304.41	2109781.12	
5219.00	78.40	359.90	4749.80	878.91	-16.20	8.09	879.06	141335.62	2109780.68	
5250.00	81.00	1.20	4755.34	909.41	-15.90	9.35	909.55	141366.12	2109780.98	
5282.00	82.30	1.00	4759.99	941.06	-15.29	4.11	941.18	141397.77	2109781.59	
5313.00	83.70	1.00	4763.77	971.83	-14.76	4.52	971.93	141428.54	2109782.12	
5327.00	84.40	1.30	4765.22	985.75	-14.48	5.44	985.84	141442.46	2109782.40	
5333.00	84.80	1.30	4765.79	991.72	-14.34	6.67	991.81	141448.43	2109782.54	
5364.00	86.30	1.10	4768.19	1022.62	-13.70	4.88	1022.69	141479.33	2109783.18	
5394.00	86.50	1.00	4770.07	1052.55	-13.15	0.75	1052.61	141509.26	2109783.73	
5425.00	86.40	1.20	4771.99	1083.49	-12.55	0.72	1083.53	141540.20	2109784.33	
5456.00	87.90	1.80	4773.54	1114.44	-11.74	5.21	1114.46	141571.15	2109785.14	
5487.00	89.90	2.50	4774.13	1145.41	-10.58	6.84	1145.40	141602.12	2109786.30	
5518.00	90.10	2.90	4774.13	1176.38	-9.12	1.44	1176.34	141633.09	2109787.76	
5549.00	90.20	3.00	4774.05	1207.33	-7.52	0.46	1207.26	141664.04	2109789.36	
5580.00	90.30	2.90	4773.91	1238.29	-5.93	0.46	1238.18	141695.00	2109790.95	
5610.00	90.50	2.90	4773.70	1268.25	-4.41	0.67	1268.11	141724.96	2109792.47	
5641.00	90.90	2.20	4773.33	1299.22	-3.03	2.60	1299.04	141755.93	2109793.85	

**Calmena Energy Services**

Company: Shell Exploration and Production Company  
 Well: Croft Farms 3407 #30-1H  
 Location: Harper County, Kansas

Date: 25-Aug-2012  
 Surveys ST2  
 Page 2  
 Job# : 6701

MD (feet)	Inclination (degrees)	Azimuth (degrees)	TVD RKB (feet)	N-S (feet)	E-W (feet)	DLS (deg/100')	VS @ 358.91° Az (feet)	Grid Y	Grid X	Comments
5672.00	91.00	1.80	4772.81	1330.20	-1.95	1.33	1329.99	141786.91	2109794.93	
5703.00	91.30	0.80	4772.19	1361.18	-1.25	3.37	1360.96	141817.89	2109795.63	
5734.00	91.40	0.80	4771.46	1392.17	-0.81	0.32	1391.93	141848.88	2109796.07	
5765.00	91.60	1.10	4770.65	1423.16	-0.30	1.16	1422.90	141879.87	2109796.58	
5795.00	91.60	1.50	4769.81	1453.14	0.38	1.33	1452.87	141909.85	2109797.26	
5826.00	91.30	1.60	4769.03	1484.11	1.22	1.02	1483.82	141940.82	2109798.10	
5857.00	91.30	1.60	4768.32	1515.09	2.08	0.00	1514.78	141971.80	2109798.96	
5888.00	90.70	1.60	4767.78	1546.08	2.95	1.94	1545.74	142002.79	2109799.83	
5979.00	90.10	359.60	4767.15	1637.07	3.90	2.29	1636.70	142093.78	2109800.78	
6071.00	89.90	0.10	4767.15	1729.06	3.66	0.59	1728.68	142185.77	2109800.54	
6164.00	90.60	0.30	4766.74	1822.06	3.99	0.78	1821.66	142278.77	2109800.87	
6257.00	91.00	0.00	4765.44	1915.05	4.23	0.54	1914.63	142371.76	2109801.11	
6352.00	90.60	359.70	4764.12	2010.04	3.98	0.53	2009.60	142466.75	2109800.86	
6446.00	90.10	359.00	4763.54	2104.03	2.91	0.92	2103.60	142560.74	2109799.79	
6541.00	90.80	359.10	4762.79	2199.02	1.34	0.74	2198.59	142655.73	2109798.22	
6635.00	89.60	358.60	4762.47	2293.00	-0.55	1.38	2292.59	142749.71	2109796.33	
6730.00	88.80	358.20	4763.79	2387.95	-3.20	0.94	2387.58	142844.66	2109793.68	
6825.00	87.20	358.50	4767.11	2482.85	-5.93	1.71	2482.51	142939.56	2109790.95	
6919.00	87.30	358.30	4771.62	2576.70	-8.56	0.24	2576.40	143033.41	2109788.32	
7014.00	85.60	357.90	4777.50	2671.47	-11.70	1.84	2671.20	143128.18	2109785.18	
7077.00	84.70	357.90	4782.83	2734.20	-14.00	1.43	2733.97	143190.91	2109782.88	
7108.00	84.60	358.60	4785.72	2765.05	-14.94	2.27	2764.83	143221.76	2109781.94	
7140.00	84.90	359.20	4788.65	2796.91	-15.55	2.09	2796.70	143253.62	2109781.33	
7171.00	85.00	359.70	4791.37	2827.79	-15.85	1.64	2827.58	143284.50	2109781.03	
7203.00	85.90	0.00	4793.91	2859.68	-15.93	2.96	2859.47	143316.39	2109780.95	
7234.00	87.10	0.80	4795.81	2890.62	-15.72	4.65	2890.40	143347.33	2109781.16	
7265.00	88.20	1.60	4797.08	2921.59	-15.07	4.39	2921.35	143378.30	2109781.81	
7297.00	89.20	1.90	4797.80	2953.57	-14.09	3.26	2953.30	143410.28	2109782.79	
7328.00	90.40	2.10	4797.91	2984.55	-13.01	3.92	2984.26	143441.26	2109783.87	
7360.00	90.60	2.20	4797.63	3016.52	-11.81	0.70	3016.20	143473.23	2109785.07	

NAD27 Ks South gr elev=1329 RKB=1350.68

### Calmena Energy Services

Company: Shell Exploration and Production Company  
 Well: Croft Farms 3407 #30-1H  
 Location: Harper County, Kansas

Date: 25-Aug-2012  
 Surveys ST2  
 Page 3

Job# : 6701

MD (feet)	Inclination (degrees)	Azimuth (degrees)	TVD RKB (feet)	N-S (feet)	E-W (feet)	DLS (deg/100')	VS @ 358.91° Az (feet)	Grid Y	Grid X	Comments
7391.00	90.60	2.10	4797.31	3047.50	-10.65	0.32	3047.15	143504.21	2109786.23	
7423.00	90.90	2.00	4796.89	3079.48	-9.50	0.99	3079.10	143536.19	2109787.38	
7454.00	91.20	1.90	4796.32	3110.45	-8.45	1.02	3110.05	143567.16	2109788.43	
7486.00	91.30	1.90	4795.62	3142.43	-7.39	0.31	3142.00	143599.14	2109789.49	
7517.00	91.40	1.40	4794.89	3173.41	-6.49	1.64	3172.96	143630.12	2109790.39	
7549.00	91.70	1.40	4794.03	3205.39	-5.71	0.94	3204.91	143662.10	2109791.17	
7580.00	91.80	1.40	4793.08	3236.36	-4.95	0.32	3235.87	143693.07	2109791.93	
7612.00	91.70	0.60	4792.10	3268.34	-4.40	2.52	3267.83	143725.05	2109792.48	
7643.00	91.60	0.20	4791.21	3299.33	-4.18	1.33	3298.81	143756.04	2109792.70	
7675.00	92.10	0.00	4790.18	3331.31	-4.12	1.68	3330.79	143788.02	2109792.76	
7706.00	91.50	359.10	4789.20	3362.30	-4.37	3.49	3361.77	143819.01	2109792.51	
7738.00	91.70	359.00	4788.31	3394.28	-4.90	0.70	3393.76	143850.99	2109791.98	
7769.00	91.20	358.00	4787.52	3425.26	-5.71	3.61	3424.75	143881.97	2109791.17	
7801.00	90.50	359.40	4787.05	3457.24	-6.44	4.89	3456.74	143913.95	2109790.44	
7833.00	89.70	359.50	4786.99	3489.24	-6.74	2.52	3488.74	143945.95	2109790.14	
7864.00	89.40	359.30	4787.24	3520.24	-7.07	1.16	3519.74	143976.95	2109789.81	
7896.00	89.70	358.10	4787.49	3552.23	-7.79	3.87	3551.74	144008.94	2109789.09	
7927.00	90.20	357.10	4787.52	3583.20	-9.09	3.61	3582.73	144039.91	2109787.79	
7959.00	90.00	356.90	4787.46	3615.16	-10.77	0.88	3614.71	144071.87	2109786.11	
7990.00	89.90	356.00	4787.49	3646.10	-12.69	2.92	3645.68	144102.81	2109784.19	
8022.00	89.80	354.80	4787.57	3677.99	-15.25	3.76	3677.62	144134.70	2109781.63	
8053.00	90.60	354.10	4787.46	3708.85	-18.25	3.43	3708.52	144165.56	2109778.63	
8085.00	90.40	353.90	4787.18	3740.67	-21.59	0.88	3740.41	144197.38	2109775.29	
8116.00	90.50	353.10	4786.94	3771.47	-25.10	2.60	3771.27	144228.18	2109771.78	
8148.00	90.50	352.00	4786.66	3803.20	-29.25	3.44	3803.07	144259.91	2109767.63	
8179.00	90.50	350.70	4786.39	3833.85	-33.91	4.19	3833.80	144290.56	2109762.97	
8211.00	90.60	349.30	4786.08	3865.36	-39.47	4.39	3865.41	144322.07	2109757.41	
8242.00	90.70	350.80	4785.73	3895.89	-44.83	4.85	3896.04	144352.60	2109752.05	
8274.00	90.40	349.50	4785.42	3927.41	-50.30	4.17	3927.66	144384.12	2109746.58	
8305.00	90.70	347.60	4785.13	3957.79	-56.45	6.20	3958.15	144414.50	2109740.43	

Company: Shell Exploration and Production Company  
 Well: Croft Farms 3407 #30-1H  
 Location: Harper County, Kansas

**Calmena Energy Services**

Date: 25-Aug-2012  
 Surveys ST2  
 Page 4

Job# : 6701

South gr elev=1329 RKB=1350.68

MD (feet)	Inclination (degrees)	Azimuth (degrees)	TVD RKB (feet)	N/-S (feet)	E/-W (feet)	DLS (deg/100')	VS @ 358.91° Az (feet)	Grid Y	Grid X	Comments
8337.00	90.70	347.20	4784.74	3989.02	-63.43	1.25	3989.51	144445.73	2109733.45	
8368.00	89.90	348.20	4784.57	4019.31	-70.04	4.13	4019.91	144476.02	2109726.84	
8400.00	90.20	348.40	4784.55	4050.64	-76.53	1.13	4051.37	144507.35	2109720.35	
8431.00	90.10	349.40	4784.46	4081.06	-82.50	3.24	4081.89	144537.77	2109714.38	
8463.00	89.90	348.70	4784.46	4112.48	-88.57	2.28	4113.42	144569.19	2109708.31	
8494.00	89.40	349.70	4784.65	4142.93	-94.38	3.61	4143.98	144599.64	2109702.50	
8526.00	89.20	350.20	4785.04	4174.44	-99.97	1.68	4175.58	144631.15	2109696.91	
8557.00	89.10	352.00	4785.50	4205.06	-104.76	5.81	4206.29	144661.77	2109692.12	
8589.00	89.20	354.10	4785.98	4236.82	-108.63	6.57	4238.12	144693.53	2109688.25	
8621.00	89.50	355.10	4786.34	4268.67	-111.64	3.26	4270.03	144725.38	2109685.24	
8652.00	90.00	353.70	4786.48	4299.52	-114.67	4.80	4300.93	144756.23	2109682.21	
8684.00	90.40	353.20	4786.37	4331.32	-118.32	2.00	4332.78	144788.03	2109678.56	
8715.00	91.30	352.70	4785.91	4362.08	-122.12	3.32	4363.61	144818.79	2109674.76	
8747.00	91.40	352.50	4785.15	4393.80	-126.24	0.70	4395.41	144850.51	2109670.64	
8778.00	91.40	352.40	4784.39	4424.52	-130.32	0.32	4426.20	144881.23	2109666.56	
8810.00	91.70	352.50	4783.53	4456.24	-134.52	0.99	4457.99	144912.95	2109662.36	
8841.00	91.80	352.50	4782.58	4486.96	-138.56	0.32	4488.78	144943.67	2109658.32	
8873.00	92.00	352.60	4781.52	4518.67	-142.71	0.70	4520.57	144975.38	2109654.17	
8904.00	92.10	352.50	4780.41	4549.39	-146.73	0.46	4551.35	145006.10	2109650.15	
8914.00	92.04	352.47	4780.05	4559.29	-148.03	0.70	4561.29	145016.00	2109648.85	330 Hard line intercept
8936.00	91.90	352.40	4779.30	4581.09	-150.93	0.70	4583.13	145037.80	2109645.95	
8948.00	91.90	352.40	4778.90	4592.98	-152.52	0.00	4595.05	145049.69	2109644.36	
8996.00	91.90	352.40	4777.31	4640.53	-158.86	0.00	4642.71	145097.24	2109638.02	Survey Proj. to 8996 MD